

4/18/2001

H2

Serial Number: 09/826,115

CRF Processing Date:

Edited by:

Verified by:

(STIC staff)

ENTERED

Changed a file from non-ASCII to ASCII

Changed the margins in cases where the sequence text was "wrapped" down to the next line.

Edited a format error in the Current Application Data section, specifically:

Edited the Current Application Data section with the actual current number. The number inputted by the applicant was the prior application data; or other _____

Added the mandatory heading and subheadings for "Current Application Data".

Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.

Changed the spelling of a mandatory field (the headings or subheadings), specifically:

Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

Inserted colons after headings/subheadings. Headings edited included:

Deleted extra, invalid, headings used by an applicant, specifically:

Deleted: non-ASCII "garbage" at the beginning/end of files; secretary initials/filename at end of file; page numbers throughout text; other invalid text, such as _____

Inserted mandatory headings, specifically:

Corrected an obvious error in the response, specifically:

Edited identifiers where upper case is used but lower case is required, or vice versa.

Corrected an error in the Number of Sequences field, specifically:

A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted

Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected:

Other: Sequence 9 - corrected (222) responsesSequence 9 - corrected (222) responses

Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/19/95

O I P E

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/826,115

DATE: 04/18/2001
TIME: 16:42:46

Input Set : A:\PTO.txt
Output Set: N:\CRF3\04182001\I826115.raw

Does Not Comply
Corrected Diskette Needed

4 <110> APPLICANT: Chang, Gwong-Jen J
6 <120> TITLE OF INVENTION: Nucleic Acid Vaccines for Prevention of
7 Flavivirus Infection
9 <130> FILE REFERENCE: 14114.0332U3
C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/826,115
C--> 11 <141> CURRENT FILING DATE: 2001-04-04
11 <150> PRIOR APPLICATION NUMBER: pct/us99/12298
12 <151> PRIOR FILING DATE: 1999-06-03
14 <150> PRIOR APPLICATION NUMBER: 09/701,536
15 <151> PRIOR FILING DATE: 2000-11-29
17 <150> PRIOR APPLICATION NUMBER: 60/087,908
18 <151> PRIOR FILING DATE: 1998-06-04
20 <160> NUMBER OF SEQ ID NOS: 31
22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 48
26 <212> TYPE: DNA
27 <213> ORGANISM: Artificial Sequence
29 <220> FEATURE:
30 <223> OTHER INFORMATION: Description of artificial sequence; note =
31 synthetic construct
33 <221> NAME/KEY: CDS
34 <222> LOCATION: (25)...(48)
36 <221> NAME/KEY: misc_feature
37 <222> LOCATION: 1-48
38 <223> OTHER INFORMATION: Amplimer 14DV389
40 <400> SEQUENCE: 1
41 ctgggtacct ctagagccgc cgcc atg ggc aga aag caa aac aaa aga 48
42 Met Gly Arg Lys Gln Asn Lys Arg
43 1 5
46 <210> SEQ ID NO: 2
47 <211> LENGTH: 8
48 <212> TYPE: PRT
49 <213> ORGANISM: Artificial Sequence
51 <220> FEATURE:
52 <223> OTHER INFORMATION: Description of artificial sequence; note =
53 synthetic construct
55 <400> SEQUENCE: 2
56 Met Gly Arg Lys Gln Asn Lys Arg
57 1 5
59 <210> SEQ ID NO: 3
60 <211> LENGTH: 50
61 <212> TYPE: DNA
62 <213> ORGANISM: Artificial Sequence
64 <220> FEATURE:
65 <223> OTHER INFORMATION: Description of artificial sequence; note =
66 synthetic construct

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68 <221> NAME/KEY: misc_feature
 69 <222> LOCATION: 1-50
 70 <223> OTHER INFORMATION: Amplimer c14DV2453
 72 <400> SEQUENCE: 3
 73 ttttcttttgcggccgctca aacttaagca tgcacattgg tcgctaagaa 50
 75 <210> SEQ ID NO: 4
 76 <211> LENGTH: 48
 77 <212> TYPE: DNA
 78 <213> ORGANISM: Artificial Sequence
 80 <220> FEATURE:
 81 <223> OTHER INFORMATION: Description of artificial sequence; note =
 82 synthetic construct
 84 <221> NAME/KEY: CDS
 85 <222> LOCATION: (25)...(48)
 87 <221> NAME/KEY: misc_feature
 88 <222> LOCATION: (1)...(48)
 89 <223> OTHER INFORMATION: Amplimer YFDV389
 91 <400> SEQUENCE: 4
 92 cttgggtacct cttagagccgc cgcc atg cgt tcc cat gat gtt ctg act 48
 93 Met Arg Ser His Asp Val Leu Thr
 94 1 5
 97 <210> SEQ ID NO: 5
 98 <211> LENGTH: 8
 99 <212> TYPE: PRT
 100 <213> ORGANISM: Artificial Sequence
 102 <220> FEATURE:
 103 <223> OTHER INFORMATION: Description of artificial sequence; note =
 104 synthetic construct
 106 <400> SEQUENCE: 5
 107 Met Arg Ser His Asp Val Leu Thr
 108 1 5
 110 <210> SEQ ID NO: 6
 111 <211> LENGTH: 41
 112 <212> TYPE: DNA
 113 <213> ORGANISM: Artificial Sequence
 115 <220> FEATURE:
 116 <223> OTHER INFORMATION: Description of artificial sequence; note =
 117 synthetic construct
 119 <221> NAME/KEY: misc_feature
 120 <222> LOCATION: 1-41
 121 <223> OTHER INFORMATION: Amplimer cYFDV2452
 123 <400> SEQUENCE: 6
 124 ttttcttttgcggccgctca cgccccaact cctagagaaa c 41
 126 <210> SEQ ID NO: 7
 127 <211> LENGTH: 51
 128 <212> TYPE: DNA
 129 <213> ORGANISM: Artificial Sequence
 131 <220> FEATURE:
 132 <223> OTHER INFORMATION: Description of artificial sequence; note =

RAW SEQUENCE LISTING

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133 synthetic construct
 135 <221> NAME/KEY: CDS 1
 W--> 136 <222> LOCATION: (25)...(51)
 138 <221> NAME/KEY: misc_feature
 W--> 139 <222> LOCATION: 1-5451
 140 <223> OTHER INFORMATION: Amplimer SLEDV410
 142 <400> SEQUENCE: 7
 143 ctgggtacct ctagagccgc cgcc atg tct aaa aaa aga gga ggg acc aga 51
 144 Met Ser Lys Lys Arg Gly Gly Thr Arg
 145 1 5
 148 <210> SEQ ID NO: 8
 149 <211> LENGTH: 9
 150 <212> TYPE: PRT
 151 <213> ORGANISM: Artificial Sequence
 153 <220> FEATURE:
 154 <223> OTHER INFORMATION: Description of artificial sequence; note =
 155 synthetic construct
 157 <400> SEQUENCE: 8
 158 Met Ser Lys Lys Arg Gly Gly Thr Arg
 159 1 5
 161 <210> SEQ ID NO: 9
 162 <211> LENGTH: 38
 163 <212> TYPE: DNA
 164 <213> ORGANISM: Artificial Sequence
 166 <220> FEATURE:
 167 <223> OTHER INFORMATION: Description of artificial sequence; note =
 168 synthetic construct
 170 <221> NAME/KEY: misc_feature
 171 <222> LOCATION: 1-38
 172 <223> OTHER INFORMATION: Amplimer cSLEDV2449
 174 <400> SEQUENCE: 9
 175 ttttcttttg cggccgctta ggcttgacg ctgggtgc 38
 177 <210> SEQ ID NO: 10
 178 <211> LENGTH: 7500
 179 <212> TYPE: DNA
 180 <213> ORGANISM: Artificial Sequence
 182 <220> FEATURE:
 183 <223> OTHER INFORMATION: Description of artificial sequence; note =
 184 synthetic construct
 186 <221> NAME/KEY: CDS
 187 <222> LOCATION: (916)...(3009)
 189 <221> NAME/KEY: misc_feature
 190 <222> LOCATION: 1-7500
 191 <223> OTHER INFORMATION: pCDJE 2-7
 193 <400> SEQUENCE: 10
 194 gacggatcgg gagatctccc gatcccstat ggtcgactct cagtacaatc tgctctgatg 60
 195 cccatagtt aagccagtt ctgctccctg cttgtgtgtt ggaggtcgct gagtagtgcg 120
 196 cgagcaaaat ttaagctaca acaaggcaag gcttgaccga caattgcatt aagaatctgc 180
 197 ttagggtag gcgtttcgat ctgcttcgat atgtacgggc cagatatacg cgttgacatt 240

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198	gattattgac	tagttattaa	tagtaatcaa	ttacgggtc	attagttcat	agccatata	300								
199	tggagttccg	cgttacataa	cttacggtaa	atggccgc	tggctgaccg	cccaacgacc	360								
200	cccgcccatt	gacgtcaata	atgacgtatg	ttcccatagt	aacgccaata	gggactttcc	420								
201	attgacgtca	atgggtggac	tatttacgt	aaactgccc	cttggcagta	catcaagtgt	480								
202	atcatatgcc	aagtacgccc	cctattgacg	tcaatgacgg	taaatggccc	gcctggcatt	540								
203	atgcccagta	catgacccta	tgggacttcc	ctacttggca	gtacatctac	gtattagtca	600								
204	tcgctattac	catggtgatg	cgggtttggc	agtacatcaa	tggcgctgga	tagcggtttg	660								
205	actcacgggg	atttccaagt	ctccacccca	ttgacgtcaa	tgggagtttgc	ttttggcacc	720								
206	aaaatcaacg	ggactttcca	aatgtcgta	acaactccgc	cccatggacg	caaatggcgc	780								
207	gtaggcgtgt	acgggtggag	gtctatataa	gcagagctct	ctggctaact	agagaaccca	840								
208	ctgcttactg	gcttatcgaa	attaatagca	ctcaactatag	ggagacccaa	gcttggtacc	900								
209	gagctcgccg	ccgccc	atg ggc	aga aag	caa aac	aaa aga gga aat gaa	951								
210			Met	Gly	Arg	Lys	Gln	Asn	Lys	Arg	Gly	Gly	Asn	Glu	
211			1		5					10					
213	ggc tca atc atg	tgg ctc	gcg agc	ttt gca	gtt gtc	ata gct	tgt	gct							999
214	Gly Ser	Ile Met	Trp	Leu	Ala	Ser	Leu	Ala	Val	Val	Ile	Ala	Cys	Ala	
215							15		20		25				
217	gga gcc atg aag	ttt tcg	aat ttc	cag ggg	aag ctt	ttt atg	acc acc	atc							1047
218	Gly Ala	Met	Lys	Leu	Ser	Asn	Phe	Gln	Gly	Lys	Leu	Leu	Met	Thr	Ile
219							30		35		40				
221	aac aac acg	att gca	gac gtt	atc gtg	att ccc	acc tca	aaa gga								1095
222	Asn Asn Thr	Asp Ile	Ala Asp	Val Ile	Val Ile	Pro Thr	Ser Lys	Gly							
223							45		50		55		60		
225	gag aac aga	tgc tgg	gtc cgg	gca atc	gac gtc	ggc tac	atg tgt	gag							1143
226	Glu Asn Arg	Cys Trp	Val Arg	Ala Ile	Asp Val	Gly	Tyr	Met	Cys	Glu					
227							65		70		75				
229	gac act atc	acg tac	gaa tgt	cct aag	ctt acc	atg ggc	aat gat	cca							1191
230	Asp Thr	Ile Thr	Tyr Glu	Cys Pro	Lys Leu	Thr Met	Gly Asn	Asp Pro							
231							80		85		90				
233	gag gat	gtg gat	tgc tgg	tgt gac	aat caa	gaa gtc	tac gtc	caa tat							1239
234	Glu Asp	Val Asp	Cys Trp	Cys Asp	Asn Gln	Glu Val	Tyr Val	Gln Tyr							
235							95		100		105				
237	gga cgg	tgc acg	cggtt acc	agg cat	tcc aag	cga agc	agg aga	tcc gtg							1287
238	Gly Arg	Cys Thr	Arg Thr	His Ser	Lys Arg	Ser Arg	Arg Arg	Ser Val							
239							110		115		120				
241	tcg gtc	caa aca	aca cat	ggg gag	agt tca	cta gtg	aat aaa	aaa gag	gct						1335
242	Ser Val	Gln Thr	His Gly	Glu Ser	Ser Leu	Val Asn	Lys Lys	Glu Ala							
243							125		130		135		140		
245	tgg ctg	gat tca	acg aaa	gcc aca	cga tat	ctc atg	aaa act	gag aac							1383
246	Trp Leu	Asp Ser	Thr Lys	Ala Thr	Arg Tyr	Leu Met	Lys Thr	Glu Asn							
247							145		150		155				
249	tgg atc	ata agg	aat cct	ggc tat	gct ttc	ctg gcg	gca gta	ctt ggc							1431
250	Trp Ile	Ile Arg	Asn Pro	Gly Tyr	Ala Phe	Leu Ala	Ala Val	Leu Gly							
251							160		165		170				
253	tgg atg	ctt ggc	agt aac	aac ggt	caa cgc	gtg gta	ttt acc	atc ctc							1479
254	Trp Met	Leu Gly	Ser Asn	Asn Gly	Gln Arg	Val Val	Phe Thr	Ile Leu							
255							175		180		185				
257	ctg ctg	ttt gtc	gct ccg	gct tac	agt ttt	aat tgt	ctg gga	atg ggc							1527
258	Leu Leu	Leu Val	Ala Pro	Ala Tyr	Ser Phe	Asn Cys	Leu Gly	Met Gly							

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259	190	195	200	
261	aat cgt gac ttc ata gaa gga gcc agt gga gcc act tgg gtg gac ttg			1575
262	Asn Arg Asp Phe Ile Glu Gly Ala Ser Gly Ala Thr Trp Val Asp Leu			
263	205	210	215	220
265	gtg ctg gaa gga gat agc tgc ttg aca atc atg gca aac gac aaa cca			1623
266	Val Leu Glu Gly Asp Ser Cys Leu Thr Ile Met Ala Asn Asp Lys Pro			
267	225	230	235	
269	aca ttg gac gtc cgc atg att aac atc gaa gct agc caa ctt gct gag			1671
270	Thr Leu Asp Val Arg Met Ile Asn Ile Glu Ala Ser Gln Leu Ala Glu			
271	240	245	250	
273	gtc aga agt tac tgc tat cat gct tca gtc act gac atc tcg acg gtg			1719
274	Val Arg Ser Tyr Cys Tyr His Ala Ser Val Thr Asp Ile Ser Thr Val			
275	255	260	265	
277	gct cgg tgc ccc acg act gga gaa gcc cac aac gag aag cga gct gat			1767
278	Ala Arg Cys Pro Thr Thr Gly Glu Ala His Asn Glu Lys Arg Ala Asp			
279	270	275	280	
281	agt agc tat gtg tgc aaa caa ggc ttc act gac cgt ggg tgg ggc aac			1815
282	Ser Ser Tyr Val Cys Lys Gln Gly Phe Thr Asp Arg Gly Trp Gly Asn			
283	285	290	295	300
285	gga tgt gga ctt ttc ggg aag gga agc att gac aca tgt gca aaa ttc			1863
286	Gly Cys Gly Leu Phe Gly Lys Ser Ile Asp Thr Cys Ala Lys Phe			
287	305	310	315	
289	tcc tgc acc agt aaa gcg att ggg aga aca atc cag cca gaa aac atc			1911
290	Ser Cys Thr Ser Lys Ala Ile Gly Arg Thr Ile Gln Pro Glu Asn Ile			
291	320	325	330	
293	aaa tac gaa gtt ggc att ttt gtg cat gga acc acc act tcg gaa aac			1959
294	Lys Tyr Glu Val Gly Ile Phe Val His Gly Thr Thr Ser Glu Asn			
295	335	340	345	
297	cat ggg aat tat tca gcg caa gtt ggg gcg tcc cag gcg gca aag ttt			2007
298	His Gly Asn Tyr Ser Ala Gln Val Gly Ala Ser Gln Ala Ala Lys Phe			
299	350	355	360	
301	aca gta aca ccc aat gct cct tcg ata acc ctc aaa ctt ggt gac tac			2055
302	Thr Val Thr Pro Asn Ala Pro Ser Ile Thr Leu Lys Leu Gly Asp Tyr			
303	365	370	375	380
305	gga gaa gtc aca ctg gac tgt gag cca agg agt gga ctg aac act gaa			2103
306	Gly Glu Val Thr Leu Asp Cys Glu Pro Arg Ser Gly Leu Asn Thr Glu			
307	385	390	395	
309	gcg ttt tac gtc atg acc gtc ggg tca aag tca ttt ctg gtc cat agg			2151
310	Ala Phe Tyr Val Met Thr Val Gly Ser Lys Ser Phe Leu Val His Arg			
311	400	405	410	
313	gag tgg ttt cat gac ctc gct ctc ccc tgg acg tcc cct tcg agc aca			2199
314	Glu Trp Phe His Asp Leu Ala Leu Pro Trp Thr Ser Pro Ser Ser Thr			
315	415	420	425	
317	gcg tgg aga aac aga gaa ctc ctc atg gaa ttt gaa gag gcg cac gcc			2247
318	Ala Trp Arg Asn Arg Glu Leu Leu Met Glu Phe Glu Glu Ala His Ala			
319	430	435	440	
321	aca aaa cag tcc gtt gtt gct ctt ggg tca cag gaa gga ggc ctc cat			2295
322	Thr Lys Gln Ser Val Val Ala Leu Gly Ser Gln Glu Gly Gly Leu His			
323	445	450	455	460

VERIFICATION SUMMARY
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L:11 M:270 C: Current Application Number differs, Replaced Current Application No
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:136 M:351 W: Sequence data Name/Key Feature Out-of-Range, SEQ ID#:7, CDS LOCATION: (25)...
(54)